

PAT-NO: JP408318186A

DOCUMENT-IDENTIFIER: JP 08318186 A

TITLE: COATING METHOD AND COATING DEVICE  
FOR GOLF BALL

PUBN-DATE: December 3, 1996

INVENTOR-INFORMATION:

NAME

YAMAGUCHI, TAKEHIKO

YAMADA, TAKEHIKO

ASSIGNEE-INFORMATION:

NAME

BRIDGESTONE SPORTS CO LTD

COUNTRY

N/A

APPL-NO: JP07149469

APPL-DATE: May 24, 1995

INT-CL (IPC): B05B012/00, B05B005/025 , B05C011/00 ,  
B05D003/00

ABSTRACT:

PURPOSE: To efficiently form a coating film having a uniform film thickness by forming the coating film of a prescribed thickness on the surface of a golf ball, then nondestructively measuring the coating film thickness at plural points, analyzing the results thereof, detecting presence or absence of the unequal coating and feeding back coating conditions under which the unequal coating is prevented.

CONSTITUTION: A coating material is ejected out of a spray gun 5a of a coating machine 5 and coating is executed according to the prescribed coating conditions when the golf ball after the completion of molding is supported by a rotary flash table 2 and is brought to be moved to a coating application position B. Next, the thickness of the coating film and the degree of the unequal application are measured by a coating film detector 6 using a method, such as for subjecting the entire surface of the golf ball to image processing by UV rays irradiation when the ball is sent to a coating film detecting position C. The measurement conditions are sent to a data analyzer 7 by which the conditions are analyzed and the present coating conditions and the resulted coating conditions are compared. The fresh coating conditions are fed back to a coating adjuster 8 when the conditions exceed the threshold. The coating conditions of a coating machine 5 are thus adjusted to the optimum state.

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PAT-NO: JP408309262A

DOCUMENT-IDENTIFIER: JP 08309262 A

TITLE: METHOD AND INSTRUMENT FOR MEASURING  
FILM THICKNESS OF COATING FILM OF GOLF BALL

PUBN-DATE: November 26, 1996

INVENTOR-INFORMATION:

NAME

YAMADA, TAKEHIKO

ASSIGNEE-INFORMATION:

NAME

BRIDGESTONE SPORTS CO LTD

COUNTRY

N/A

APPL-NO: JP07140027

APPL-DATE: May 15, 1995

INT-CL (IPC): B05C013/00, A63B045/00 , B05B015/00 ,  
B05C011/10 , G01B011/02

ABSTRACT:

PURPOSE: To make it possible to easily and exactly measure the thicknesses of a clear coating film by irradiating a golf ball formed with the coating film of a clear coating material compounded with a fluorescent brightening agent with UV rays and observing the resulted secondary emission rays with a CCD camera and subjecting the taken-in images to many valued processing to obtain the bright and dark images of the coating film.

CONSTITUTION: This instrument has a UV ray irradiation device 2 consisting of a light source 3 for radiating light L including the UV light UV and a UV filter 4 to allow the transmission of the UV light UV in the case the thicknesses of the coating film at the respective points of the golf ball 1 formed with the coating film of the clear coating material compounded with the fluorescent brightening agent on the surface are measured. The ball 1 is irradiated with the UV light UV and the generated secondary emission rays are detected by the CCD camera 5. The taken-in images are then binarized by an image processor 6, by which the bright and dark images are obtd. Namely, the parts where the film thickness is small are dark and the parts where the thickness is large are bright and, therefore, the variations in film thicknesses are identified from the results thereof. For example, the processed images are calculated and are compared with a previously formed calibration curve, by which the measurement of the film thicknesses is executed.

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ASSIGNEE-INFORMATION:  
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BRIDGESTONE SPORTS CO LTD N/A

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